

Product Specifications

AquaSys® 120 1.75@500g

- Weight: 0.93kg
- Dimensions: 23 x 21 x 6 cm
- Diameter: 1.75MM
- Volume: 500g
- Extruder temperature: 220-245°C
- Build plate temperature: Up to RT-130°C
- Chamber temperature: 80-120°C

AquaSys® 120 1.75@1kg

- Weight: 1.5Kg
- Dimensions: 23 x 21 x 8 cm
- Diameter: 1.75MM
- Volume: 1kg
- Extruder temperature: 220-245°C
- Build plate temperature: Up to RT-130°C
- Chamber temperature: 80-120°C

AquaSys® 120 2.85@500g

- Weight: 1.0kg
- Dimensions: 23 x 21 x 6 cm
- Diameter: 2.85MM
- Volume: 500g
- Extruder temperature: 220-245°C
- Build plate temperature: Up to RT-130°C
- Chamber temperature: 80-120°C

AquaSys® 120 2.85@1kg

- Weight: 2.3kg
- Dimensions: 33 x 31 x 11 cm
- Diameter: 2.85MM
- Volume: 1kg
- Extruder temperature: 220-245°C
- Build plate temperature: Up to RT-130°C
- Chamber temperature: 80-120°C

Frequently Asked Questions

What is AquaSys 120?

AquaSys 120 is a high-performance, water-soluble 3D printing support material built to be used with a variety of engineering grade build materials.

What do you mean by “high performance”?

Among other factors, we define “high performance” as the perfect blend of material compatibility, fast dissolution and high-quality print stability—and AquaSys 120 delivers on all three.

- **Compatible** with a large spectrum of FDM materials
- **Dissolves** up to 6X faster than a leading brand of PVA, saving you time and money
- **Stable** in chamber temperatures up to 120°C and has a low moisture uptake, making it extremely print-reliable

What is the big deal about AquaSys 120?

AquaSys 120 is a big deal because it saves users time while contributing to high-quality results. It works with more materials at higher temperatures than any alternative, all while reducing post-production costs. If that’s not a big deal, what is?

What are the print parameters?

The following parameters work best, but every printer is different, so be sure to check your equipment before use.

- Nozzle temperatures between 235° and 245°C
- Chamber temperatures of up to 120°C
- Build plate temperatures up to 130°C

What is the glass transition temperature (Tg)?

The glass transition temperature, or Tg, of AquaSys 120 is around 92°C. However, it’s designed with sufficient modulus at build chamber temperatures as high as 120°C to resist issues like sag and deformation.

Does it work?

The short answer is yes. We are confident in our product and have invested countless hours testing and gathering feedback from top printing manufacturers to make sure AquaSys 120 performs as described.

How can I access technical specifications?

You can find the Safety Data Sheet (SDS) and Technical Data Sheet (TDS) for AquaSys 120 at [infinitematerialsolutions.com/resources/](https://www.infinitematerialsolutions.com/resources/).

Frequently Asked Questions (continued)

Can we discuss exclusive rights to the material?

First, thank you for your confidence and support of our water-soluble support material. At this stage, we are printer-technology agnostic. But we are actively developing special formulations for specific materials and systems. If you're interested, we can set up a time to talk about it.

Can you tune in-house?

Yes. Our staff has decades of expertise in the additive field, and we partner with printer OEMs to tune this material.

What other materials do you offer?

Infinite Material Solutions develops a lot of materials, but most of them are confidential for the time being. We do, however, offer custom compounding solutions and filament manufacturing. If you're interested in more details, ask about our contract manufacturing services.

Does the material offer good adhesion properties?

AquaSys adheres to almost all substrates, even ultra-high-molecular-weight polyethylene (UHMWPE). The material is designed to minimize warpage and have superior adhesion to build materials and build plates.

Is the material safe?

AquaSys 120 is non-toxic and safe to handle.

How long does the support take to dissolve?

In 80°C water, AquaSys 120 dissolves at a rate of four cubic centimeters per hour.

Do you have more documentation or testing to back your claims?

You can find all critical information about our claims in the industry-standard documentation on our website.

Visit infinitematerialsolutions.com/resources/ to access material safety data sheets, technical data sheets, brochures and whitepapers.

What are the recommended handling and storage procedures?

- As a water-soluble material, AquaSys tends to absorb moisture. Always store your filament in the resealable bag it arrives in, and double-check that you've completely sealed the bags after each use.
- The metal bag should contain a desiccant. Don't throw it out, and consider adding another desiccant if available for additional moisture protection.
- Never expose the desiccant to moisture. Otherwise you'll need to replace it.
- If AquaSys absorbs moisture while in storage, you'll notice the color of the printed filament will be cloudy, instead of translucent gold. If that happens, dry at 70°C for 3-4 hours.
- Never store AquaSys on the back or side of the printer.